



Soufriere Marine Management Association (SMMA) directors' workshop on MPA governance



19 January 2012, Soufriere, St Lucia



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and Environmental Studies (CERMES)
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<http://www.cavehill.uwi.edu/cermes>



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Citation

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Disclaimer

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OPENING AND INTRODUCTORY SESSION

Welcoming remarks and introductions

The workshop resource person from the Centre for Resource Management and Environmental Studies (CERMES) at The University of the West Indies' Cave Hill Campus in Barbados, Patrick McConney, welcomed the participants who introduced themselves (Appendix 1). Nadia Cazaubon, Project Officer of the Soufriere Marine Management Association (SMMA), arranged for the workshop to be held at the Leisure Inn conference room in Soufriere along with all other logistics. She offered apologies on behalf of several SMMA directors and other interested parties who could not attend. The board has twelve appointed members.

Introduction to MPA governance project

After reviewing the workshop programme (Appendix 2), McConney used slides (Appendix 3) to introduce the marine protected area (MPA) governance project within which the workshop was being held. CERMES had responded successfully to Funding Opportunity NOAA-NOS-IPO-2011-2002585 and entered into a Coral Reef Conservation Program (CRCP) International Coral Reef Conservation Cooperative Agreement from 1 October 2011 to 1 October 2012 (award NA11NOS4820012). The project is entitled 'Adaptive capacity for MPA governance in the eastern Caribbean'. Participating countries are Grenada, Saint Lucia, and St. Vincent and the Grenadines. Project value is US\$230,000 with half from National Oceanic and Atmospheric Administration (NOAA) grant funding and the remainder matched mainly by CERMES with minor contributions from the participating countries. The MarGov project funded by IDRC of Canada assisted travel to SMMA.

On the MPA governance web page at http://cermes.cavehill.uwi.edu/mpa_governance.html one can find out that the project contributes to Priority Goal One of the NOAA CRCP International Strategy is to: *work with regional initiatives to build MPA networks and strengthen local management capacity to improve and maintain resilience of coral reef ecosystems and the human communities that depend on them.* More specifically it tackles Objective 2 which is to: *develop and implement comprehensive long-term capacity building programs for existing MPAs, based on capacity assessments to provide training, technical assistance, and follow-up support specifically for a number of identified areas and optional others.* The cooperative agreement addresses the following:

- a. management planning and effectiveness evaluation;
- b. integrated monitoring linked to strategic planning;
- c. communication and community engagement; and
- d. strengthening governance and adaptation to change

Workshop objectives and expectations

The SMMA workshop objectives were presented as the following:

- Inform the SMMA board about the MPA governance project and its activities
- Increase the board's capacity for MPA governance especially in relation to EBM, climate change, management effectiveness and adaptive management
- Assist the board to contribute to the MPA governance follow-up activity at SMMA

Participants then shared their expectations of the workshop, phrased mainly in terms of what needed to be addressed at the SMMA in terms of governance. They said that the current governance arrangements were ineffective. User conflicts originally addressed in the process of establishing the SMMA in the early 1990s were surfacing again in different forms, but with different stakeholder groups and dynamics in some cases.

The SMMA board itself needs to become better organised and more cohesive to tackle the challenges in governance reform that lie ahead. This includes the strategic planning that is one of the MPA governance project follow-up activities. The board may need to be restructured, stakeholders re-engaged, new partners acquired, emerging threats faced and strong community support re-established. Several participants felt that although revenue generation and financial sustainability cannot be ignored, these should not override conservation and community engagement.

Participants expected that several of the above points could be discussed during the workshop in a more relaxed and open fashion than in a formal board meeting. A SWOT analysis would be a useful start to the process of strategic planning.

Overview of adaptive MPA governance

To end this introductory session, some of the elements of adaptive MPA governance were briefly reviewed:

- Assess current circumstances
- Plan strategically for the future
- Accept uncertainty and surprises
- Encourage participation
- Build adaptive capacity
- Enable self-organisation
- Establish learning institutions
- Think in terms of resilience

SETTING THE SCENE AND COMMUNICATING KEY CONCEPTS

Ecosystem-based management in a changing climate

Using the slide presentation (Appendix 3), the workshop discussed key concepts. Regarding governance, there must be as much attention paid to creating societal opportunities as to problem-solving. It was pointed out that fundamental differences in values and ethics could be the root cause of deep conflicts among the SMMA's stakeholders and other interested parties. An alternative view was that common ground could be found in their fundamental values and ethics, but differences and conflicts surfaced in practices carried out in short term coping strategies. It would be important to determine which perspective was correct since the first offered little hope for consensus building whereas the second primarily required that short term needs be addressed along the path to longer term goals.

Ecosystem-based management (EBM) and integrated coastal management (ICM) also stimulated discussion. Participants noted the tension between the growing necessity to address integration and the still prevalent practice of operating in sectoral or organisational silos that often competed, especially within the public service. Political will to institute broad public sector reform was deemed necessary along with grassroots pressure from civil society to affect change. Without pressure from both directions, tools such as marine spatial planning (MSP) were unlikely to be effectively implemented and even incremental EBM would be problematic.

Resilience, in an environmental context, was better appreciated in the wake of Hurricane Tomas. Even so, key decision makers often did not make the necessary connections between environment, livelihoods and economic or social development. Participants thought that the SMMA had an almost moral obligation to be a leader in civil society support for change and building the adaptive capacity to facilitate reform. McConney introduced the concept of transformation as summarising what participants were discussing (Figure 1).

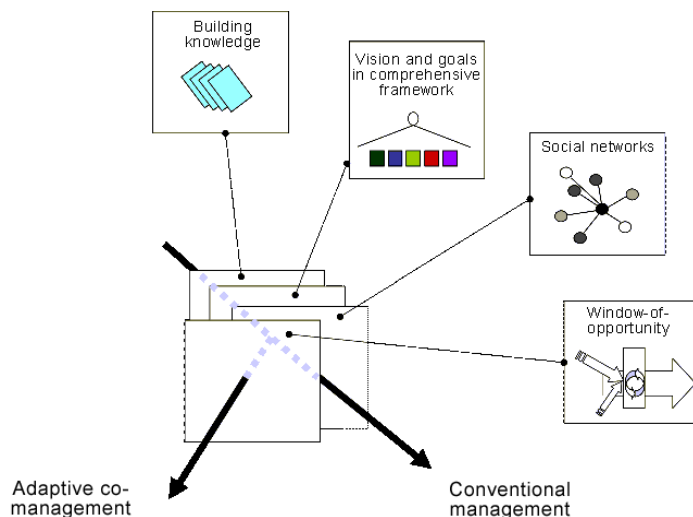


FIGURE 1 TRANSFORMATIVE CHANGE

(Source: Olsson et al 2004)

Strategic planning is a vital component of transformation along with building knowledge, networking and finding a window of opportunity for making the changes which must be managed. EBM and climate change must be factored into the strategic planning, especially through mechanisms for adaptation.

Measuring management effectiveness: governance

Participants were introduced to the publication (available via internet) entitled “How Is Your MPA Doing? A guidebook of natural and social indicators for evaluating marine protected area management effectiveness.”

Although all of the generic governance goals were said to be relevant, 1 and 2 were thought to be context-setting whereas 3 to 5 were more operational. The objectives under each were not discussed in detail but, of the 16 indicators, G1, G6, G8, G12 and G16 attracted the most attention as being relevant to the SMMA. It was suggested that a command-and-control approach to governance would not work at the SMMA for many reasons. Voluntary compliance was essential, with education and awareness building being major ingredients.

McConney touched lightly on the methods associated with the measurement of management effectiveness using the indicators. He stressed the difference between measuring and monitoring versus undertaking the activities actually used to manage adaptively. Issues such as respondent fatigue were examined.

Participants were reminded of the many resources freely or easily available from the internet or from sources within the region. These included several guidebooks and reports on projects that had used these tools. Copies of Conservation International's 'Science to Action Guidebook' were distributed to all participants. In addition, a CD containing 'How Is Your MPA Doing?' and its case studies was given to the SMMA chairman.

Instituting adaptive management through learning

Adaptive management was explained and participants used a worked example of an experiment in reducing the pressure on a beach in the SMMA in order to focus the discussion of the four steps outlined in the slides. The need for iterations within steps was appreciated. Limited capacity (financial, human, physical etc.) was a reality that could dictate the approaches to and extent of adaptive management. A paradox of participation could develop if the SMMA tried to engage too many stakeholders too often. Communication, however, was vital. Effective communication would be instrumental in institutionalising changes that were beneficial. The need for change management was again stressed.

Fundamental to the entire process was a change on philosophy that did not brand as 'failures' experiments that did not succeed in achieving all objectives. Rather, these would need to be looked at anew as learning opportunities. The process of testing, evaluating, learning and adapting was itself a strong sign of success.

DISCUSSION AND EXERCISES TO FOLLOW UP ON CONCEPTS

In order to assist the upcoming strategic planning two exercises were undertaken. The first was to use the diagnosis radar method to scope burning issues relevant to the SMMA transformation. The second was to conduct a very rapid (and hence fairly superficial) SWOT analysis with emphasis on MPA governance. In both cases participant first worked individually on the forms provided, then offered their ideas to a pool of points that McConney entered on electronic versions of the forms projected on a screen so all could see the progress.

Diagnosis radar

The output from the diagnostic radar is shown in Appendix 4. It is the combined thinking of what issues will be key to the SMMA in formulating a strategic plan. The diagnosis radar was done as a warm up to tackling the SWOT. The segment on people and livelihoods focused on the need to reduce conflict and increase opportunities for better livelihoods, health and well-being. This and the ecosystems segment reflected taking an ecosystems approach into the watershed and across economic sectors. Most attention was paid, however, to institutions and governance which featured building adaptive capacity and resilience through partnerships or networks. External drivers were political, economic, ecological and technological.

SWOT analysis

Appendix 5 contains the output from the SWOT analysis. Each quarter is divided into 'global/regional' and 'national/local'. 'Global/regional' contains features that are usually beyond the influence of the SMMA and to which the organization must adapt. However, some 'national/local' features are within the influence of the SMMA either directly or indirectly, so mitigation may be possible in addition to adaptation. These divisions also acknowledge that governance is multi-level and that different policy cycles operate at different levels.

Strengths of the SMMA include the considerable reputation it has acquired among Caribbean MPAs as being well designed and managed. This goodwill or social capital may be leveraged for resources and assistance. Weaknesses and threats acknowledge the vulnerability of the SMMA in an era of globalization that extends to the priorities and preferences of funding agencies. Hence it is all the more important that the SMMA have a

robust strategic plan in order not to be swayed and seduced by whatever are the prevailing global trends if these are not reflected at the local and national levels. Many of the opportunities depend on capitalizing on the creativity and innovation that the SMMA should be able to mobilize with its partners. In examining its opportunities the SMMA board needs to think outside of the box and ecosystem wide inter-sectorally in order to appreciate and harness all potentially useful links in its network, especially the weak links to new partners.

SYNTHESIS OF KEY LEARNING, REFLECTIONS, NEXT STEPS, CLOSE

This was a very brief session. Comments on key learning and in reflection included the following:

- The concepts presented were not new, but were packaged to provided new perspectives
- These were good theories that were hard to put into practice due to site-specific nuances
- The workshop needs to be repeated with more board members and other stakeholders
- It was unfortunate that there was little mention of CAMMA as a specific part of the SMMA
- Although CAMMA may be implied in the term SMMA, not doing so explicitly is detrimental
- Immediate follow-up step is formation of a board sub-committee to formulate the strategic planning terms of reference, and this can be done quickly under the leadership of the chairman of the board

To close the meeting the SMMA chairman, Thomas Edmund, thanked all for taking the time to attend. He said that there would be follow-up action under the MPA governance project and otherwise. There is a need for cautious speed. Governance processes often cannot be rushed if done properly, but they also run the risk of being overtaken by events and rendered ineffective if they proceed too slowly. A balance must be struck.

APPENDICES

Appendix 1– Participants

Participant name	Organisation/affiliation	Phone(s) and email(s)
Julian Alexis	Soufriere Fishermen's Cooperative Society Ltd.	758-459-5958 souffish@ gmail.com
Nadia Cazaubon	Project Officer, Soufriere Marine Management Association (SMMA)	758-459-5500 cazaubon@smma.org.lc
Cuthbert Didier	Director of Yachting (SMMA Director representing Ministry of Tourism)	758-716-4449
Thomas Edmund	Chairman, Soufriere Marine Management Association (SMMA)	758-724-6332 edmundt@candw.lc
Bob Hathaway	Manager, Marigot Marina Management Ltd (SMMA Director representing the St. Lucia Hotel & Tourism Association)	758-451-4275 manager@marigotbaymarina.com
Patrick McConney	Centre for Resource Management and Environmental Studies, UWI	246-417-4725 patrick.mcconney@cavehill.uwi.edu
Keith Nichols	Environmental Sustainable Development Unit (ESDU), OECS	758-455-6362; 758-716-2001 kenickz@gmail.com
Bernd Rac	President, St. Lucia Dive Association (ANBAGLO)	758-285-7025 scuba@candw.lc
Sarita Williams-Peter	Fisheries Biologist, Department of Fisheries	758-468-4143/35

Appendix 2 – Workshop programme

Focus: Marine protected area (MPA) governance ...with emphasis on evaluating management effectiveness and instituting adaptive and ecosystem-based management

TIME	TASK
0845	On time arrival for registration, document distribution, logistics
0900	Opening and introductory session also for guests and media <ul style="list-style-type: none"> • Welcoming remarks and introductions: SMMA • Introduction to MPA governance project: CERMES • Workshop objectives and expectations: CERMES and SMMA • Overview of adaptive MPA governance: CERMES
1000	BREAK
1030	Setting the scene and communicating key concepts (presentations, exercises, discussion) <ul style="list-style-type: none"> • Ecosystem-based management in a changing climate • Measuring management effectiveness: governance • Instituting adaptive management through learning
1230	LUNCH
1330	Ideas are only proven to be good if there is action to follow them up (exercises, discussion) <ul style="list-style-type: none"> • Comments and clarification from the morning sessions • Practical application of concepts to SMMA governance
1530	BREAK
1600	Synthesis of key learning, reflections, next steps, close
1630	Close

Resources:

- Karrer, L., P. Beldia II, B. Dennison, A. Dominici, G. Dutra, C. English, T. Gunawan, J. Hastings, L. Katz, R. Kelty, M. McField, E. Nunez, D. Obura, F. Ortiz, M. Quesada, L. Sivo, and G. Stone. 2001. Science to Action Guidebook. Science and Knowledge Division. Conservation International, Arlington Virginia, USA. [<http://science2action.org/files/s2a/s2a-guidebook-low-resolution.pdf>]
- Parks, J. 2011. Adaptive Management in Small-scale Fisheries: a Practical Approach in R. S. Pomeroy and N. Andrew (eds.) Small-scale Fisheries Management: Frameworks and Approaches for the Developing World. CABI Publishing, Oxfordshire. 258 pp
- Pomeroy, R., J.E. Parks and L.M. Watson. 2004. How Is Your MPA Doing? A guidebook of natural and social indicators for evaluating marine protected area management effectiveness. IUCN, Gland, Switzerland and Cambridge, UK. 216pp. [<http://www.mpa.gov/pdf/national-system/mpadoing.pdf>]

Appendix 3 – Slide presentation

Workshop on MPA governance

*19 January 2012
Soufriere, St Lucia*



Introduction, objectives, expectations, overview of adaptation

INTRODUCTION TO MPA GOVERNANCE PROJECT

Adaptive capacity for marine
protected area governance
in the eastern Caribbean

1 Oct 2011 - 1 Oct 2012
Implemented by CERMES
Funded mainly by NOAA

Participating countries and MPA sites

- **Grenada**
 - Sandy Island/Oyster Bed (SIOBMPA)
 - Molinere/Beausejour (MBMPA)
 - Woburn/Clarke's Court Bay (WCCBMPA)
- **Saint Lucia**
 - Soufriere Marine Management Area (SMMA)
- **St. Vincent and the Grenadines**
 - Tobago Cays Marine Park (TCMP)

4

Problem!

- Most MPA interventions bio-physical, sometimes socio-economic
- Few focus on governance despite growing evidence that ecologically well-designed and managed MPAs fail due to insufficient attention to the human dimension of governance.

5

Solution?

- Focus on making MPA governance resilient to absorb shocks and carry on as strategically planned
- Focus further on the features that give MPA governance arrangements the capacity to be adaptive for this

6

Objective 1: Develop the adaptive capacity of key stakeholders in Grenada for MPA governance through four linked training workshops with follow-up practical learning by doing

1. Evaluating management effectiveness emphasizing EBM, climate change, governance (Nov 2011)
2. Strategic planning, governance reform and adaptive management capacity for resilience (Feb/Mar 2012)
3. Communication, community engagement, and participatory monitoring and evaluation (Apr/May 2012)

7

Objective 2: Extend the capacity development to Saint Lucia and St. Vincent and the Grenadines for a limited comparison of MPA sites so as to inform potential replication

- Promote networking to strengthen ties among MPAs
- Participants from Saint Lucia and St Vincent and the Grenadines will be integrated into the project
- Major part of the project's continuous PM&E
- At the end they will be able to conclude whether the design for Grenada can be applied fully in their countries or, if not, how capacity building needs to be tailored differently to be more successful

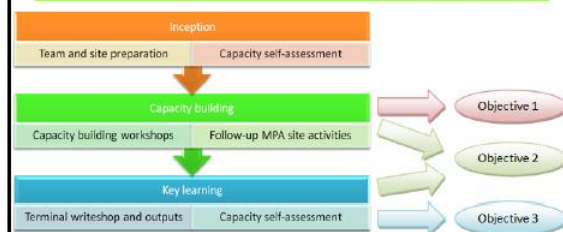
8

Objective 3: Document and foster learning from the outcomes of objectives 1 and 2 regionally and internationally through use of multiple media for communication with MPA interests

- Understanding process of institutional learning, and using the lessons learned to retain adaptive capacity
- Action learning group methodology along with participatory monitoring and evaluation.
- Writeshops have proven effective means for project participants to pull together key learning while simultaneously building capacity.

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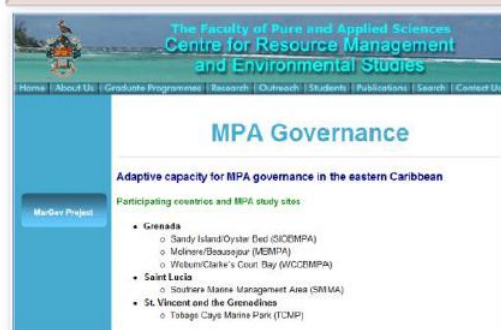
Implementation strategy



First workshop held in Grenada 21-23 November 2011
Follow-up activity currently in progress at five MPAs
Second workshop scheduled for 22-24 February 2012

10

Visit the web page, ask questions!



SMMA workshop objectives

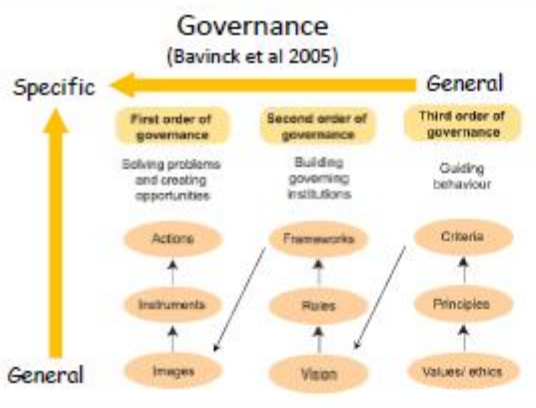
- Inform the SMMA board about the MPA governance project and its activities
- Increase the board's capacity for MPA governance especially in relation to EBM, climate change, management effectiveness and adaptive management
- Assist the board to contribute to the MPA governance follow-up activity at SMMA

Overview of adaptive MPA governance

- Assess current circumstances
- Plan strategically for the future
- Accept uncertainty and surprises
- Encourage participation
- Build adaptive capacity
- Enable self-organisation
- Establish learning institutions
- Think in terms of resilience

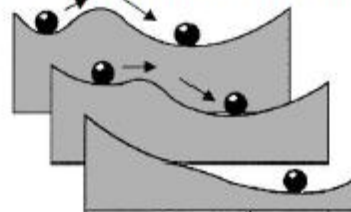
What is governance?

- Governance is public and private interactions initiated to solve societal problems and create societal opportunities.
- Includes principles guiding interactions and institutions that enable them.



What is resilience?

- Resilience is the capacity of a system to absorb disturbance and reorganize so as to retain essential functions, structure, identity and feedbacks



Adaptive capacity (Natural Resources Canada 2007)



ECOSYSTEM-BASED MANAGEMENT IN A CHANGING CLIMATE

Ecosystem-Based Management



(Source: <http://stephenledy.net/category/food/>)

Fisheries and coastal resources in an ecosystem approach to fisheries



Intersectoral planning facilitates resilience

EBM PROMOTES INTER-SECTORAL PLANNING

ECOSYSTEM-BASED MANAGEMENT POLICY



UNEP (2011): Taking Steps toward Marine and Coastal Ecosystem-Based Management - An Introductory Guide

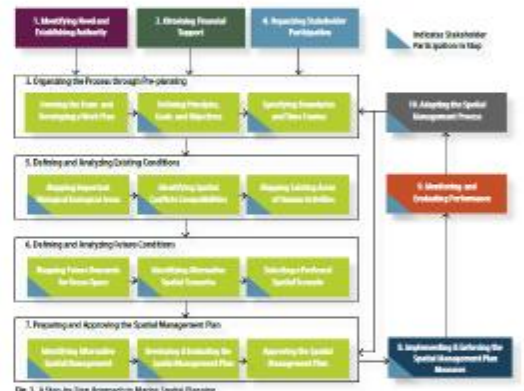


Fig. 3. A 4-Step Approach to Marine Coastal Planning

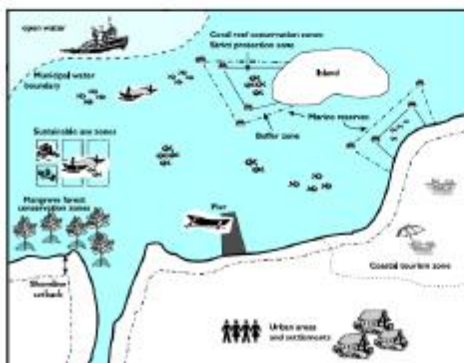
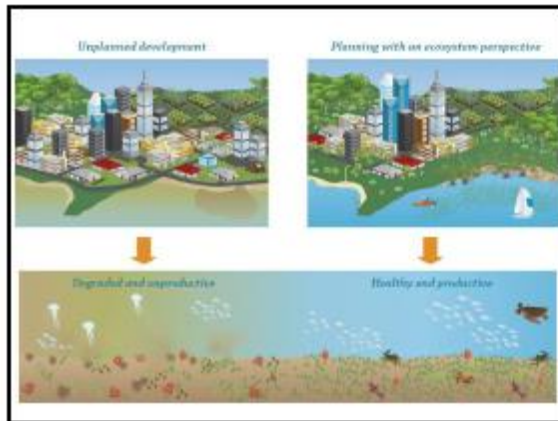


Figure 3. Typical CBM zone plus for municipal waters. Source: onecoon.org

The EBM spectrum



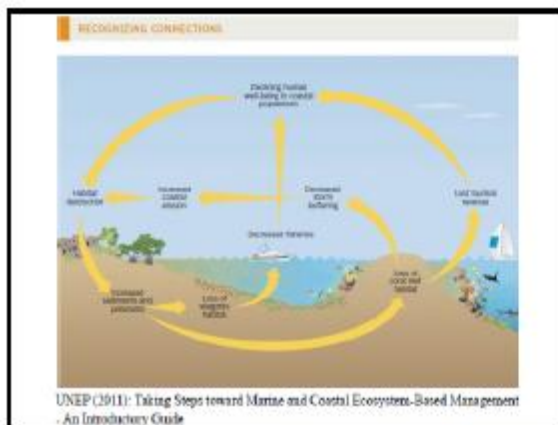
Just like co-management...it doesn't have to happen all at once



Core elements of EBM

1. Recognizing connections within and across ecosystems
2. Utilizing an ecosystem services perspective
3. Addressing cumulative impacts
4. Managing for multiple objectives
5. Embracing change, learning, and adapting

UNEP (2011): Taking Steps toward Marine and Coastal Ecosystem-Based Management
An Introductory Guide



UNEP (2011): Taking Steps toward Marine and Coastal Ecosystem-Based Management
An Introductory Guide

Climate change has different meanings in different contexts

- Intergovernmental Panel on Climate Change (IPCC)
 - "any change in climate over time, whether due to natural variability or as a result of human activity" (IPCC, 2007: 871)
- United Nations Framework Convention on Climate Change (UN, 1992: Article 1)
 - "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods"
 - Anthropogenic climate change

Climate change and variability can impact MPAs through multiple linked pathways

- Ocean currents
- Sea level rise
- Rainfall (drought, floods)
- Evaporation
- River flows
- Thermal structure
- Storm severity
- Storm frequency
- Ocean acidification
- Salinity fluctuation
- Sea Surface Temperature
- El Niño-Southern Oscillation (ENSO)



Environment

WORLDWIDE REPORT

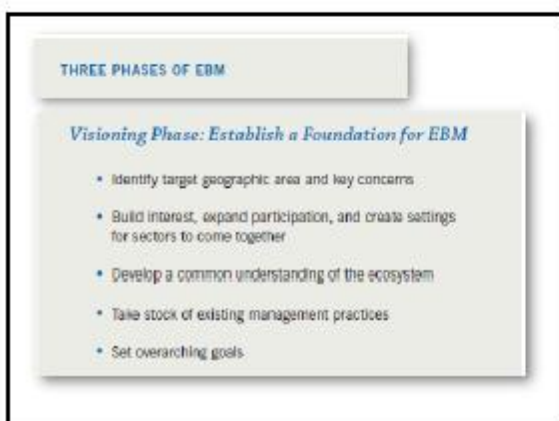
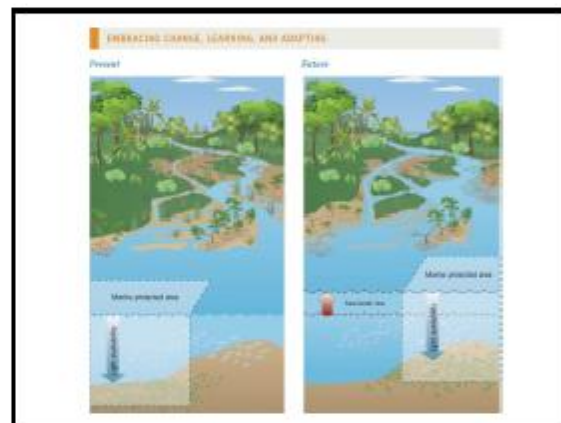
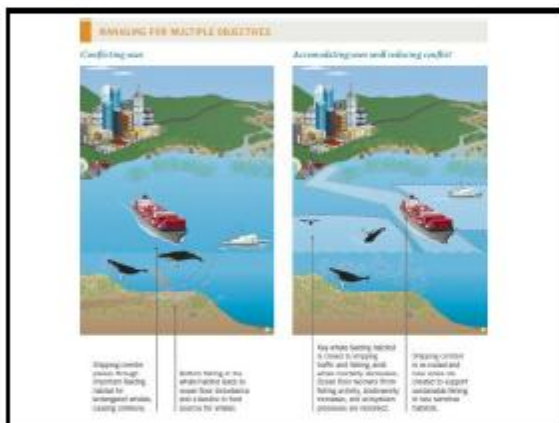
Caribbean Islands in a Changing Climate

by Roger A. Pielke, Jr., Leland A. Stott and Susan E. Solomon

Little is known about the long-term effects of climate variability and change in the Caribbean Sea and ... within its larger marine ecosystems

For the Caribbean region, projected increases of 1.5–2°C in global air temperature imply:

- Decreased length of the rainy season and increased length of the dry season: 6–8 percent by 2050.
- Increased frequency of intense rains—a 20 percent increase by 2050.
- Sea level rise of 30–50 cm by 2080.
- Increased intensity of the strongest hurricanes



THREE PHASES OF EBM

Implementation Phase: Apply and Adapt EBM

- Monitor, evaluate, and adapt
- Continue to communicate and educate
- Secure sustainable financing for EBM implementation over time

GEOGRAPHIC SCOPE OF MANAGEMENT STRATEGIES



Integrated Coastal Zone Management
ICZM focuses on the land side of the coastal zone, typically encompassing the coastal plain as well as the nearshore marine environment.



Marine Spatial Planning
MSP covers the marine environment, either within a single jurisdiction (such as territorial seas or within coastal waters) or across many jurisdictions (continental or solar waters, territorial seas, and areas beyond national jurisdiction).

GEOGRAPHIC SCOPE OF MANAGEMENT STRATEGIES



Watershed Management

Watershed management extends through drainage basins, the focus of management is primarily on activities that affect water flow, and secondary on activities that affect water quality, including issues of sediment and chemical contaminants.



Fisheries Management

Conventional fisheries management focuses on commercially targeted fish stocks. However, there has been an effort to move from single to multi-species management, and essential fish habitat protections have incorporated mangroves to a variety of habitats.



Marine Protected Areas

MPAs can vary in scope from small no-take areas targeting the water column and/or benthos, to large MPAs that include land areas of land and sea.

EBM ADAPTIVE MANAGEMENT CYCLE

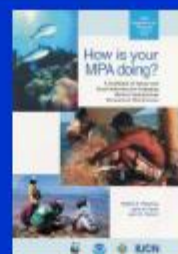
Adaptive management

Monitoring ecosystem condition, evaluating policy and management impact, communicating new learning, and adapting management strategies to changing conditions as an EBM process flows along are each essential for achieving effective outcomes.



UNEP DEFINITIONS FOR ECOSYSTEM APPROACH AND EBM

"The ecosystem approach is a strategy for the integrated management of land, water and living resources that provides sustainable delivery of ecosystem services in an equitable way."
Source: UNEP Ecosystem Management Programme



MEASURING MANAGEMENT EFFECTIVENESS: GOVERNANCE

Introducing the MPA guidebook's Governance Indicators *(n=16)*



Borrowed from Bob Pomeroy



There are 5 governance goals...

- 1 - Effective management structures and strategies maintained
- 2 - Effective legal structures and strategies for management maintained
- 3 - Effective stakeholder participation and representation ensured
- 4 - Management plan compliance by resource users enhanced
- 5 - Resource use conflicts managed and reduced



... each with associated objectives.

- 1 - Effective **management structures and strategies** maintained *(6 associated objs)*
- 2 - Effective legal structures and strategies for management maintained
- 3 - Effective stakeholder participation and representation ensured
- 4 - Management plan compliance by resource users enhanced
- 5 - Resource use conflicts managed and reduced



... each with associated objectives.

- 1 - Effective management structures and strategies maintained
- 2 - Effective **legal structures and strategies** for management maintained *(5 associated objs)*
- 3 - Effective stakeholder participation and representation ensured
- 4 - Management plan compliance by resource users enhanced
- 5 - Resource use conflicts managed and reduced



... each with associated objectives.

- 1 - Effective management structures and strategies maintained
- 2 - Effective legal structures and strategies for management maintained
- 3 - Effective **stakeholder participation and representation** ensured *(3 associated objs)*
- 4 - Management plan compliance by resource users enhanced
- 5 - Resource use conflicts managed and reduced



... each with associated objectives.

- 1 - Effective management structures and strategies maintained
- 2 - Effective legal structures and strategies for management maintained
- 3 - Effective stakeholder participation and representation ensured
- 4 - Management plan **compliance** by resource users enhanced *(6 associated objs)*
- 5 - Resource use conflicts managed and reduced



... each with associated objectives.

- 1 - Effective management structures and strategies maintained
- 2 - Effective legal structures and strategies for management maintained
- 3 - Effective stakeholder participation and representation ensured
- 4 - Management plan compliance by resource users enhanced
- 5 - Resource **use conflicts** managed and reduced (*1 associated obj*)



There are 16 Governance Indicators:

- G1 - Level of resource conflict
- G2 - Existence of a decision-making & mngmnt body
- G3 - Existence and adoption of a management plan
- G4 - Local understanding of MPA rules & regulations
- G5 - Existence and adequacy of enabling legislation
- G6 - Availability & allocation of MPA admin resources
- G7 - Existence & application of sci. research & input
- G8 - Existence & activity level of community org.(s)



There are 16 Governance Indicators:

- G9 - Degree of interaction btwn managers & stkhldrs
- G10 - Proportion of stkhldrs trained in sustainable use
- G11 - Level of training provided to stkhldrs in particp.
- G12 - Level of stkhldr particp. & satisfaction in management process & activities
- G13 - Level of stkhldr involvement in surveillance, monitoring, & enforcement
- G14 - Clearly defined enforcement procedures
- G15 - Enforcement coverage
- G16 - Degree of information dissemination to encourage stkhldr compliance



4 focus on stakeholder participation

- G9 - Degree of **interaction** btwn managers & stkhldrs
- G11 - Level of **training** provided to stkhldrs in particp.
- G12 - Level of stkhldr particp. & satisfaction in **management process & activities**
- G13 - Level of stkhldr involvement in **surveillance, monitoring, & enforcement**



A few are input & process focused...

- G14 - Clearly defined **enforcement** procedures
- G15 - **Enforcement** coverage
- G10 - Proportion of stkhldrs **trained** in sustainable use
- G11 - Level of **training** provided to stkhldrs in particp.



... while others look at outputs and perceptions

- G2 - **Existence** of a decision-making & mngmnt body
- G3 - **Existence** and adoption of a management plan
- G8 - **Existence** & activity level of community org.(s)
- G12 - **Level of stkhldr particp. & satisfaction** in management process & activities



Guidebook shows which indicators overlap with which goals and objs:



Tools for measuring effectiveness

- Secondary data from various documents
- Key informants from around the MPA
- Semi-structured or informal interviews
- Questionnaire/quantitative surveys
- Focus groups and group interviews
- Maps/geographic information systems
- Numerous means of data visualisation



INSTITUTING ADAPTIVE MANAGEMENT THROUGH LEARNING



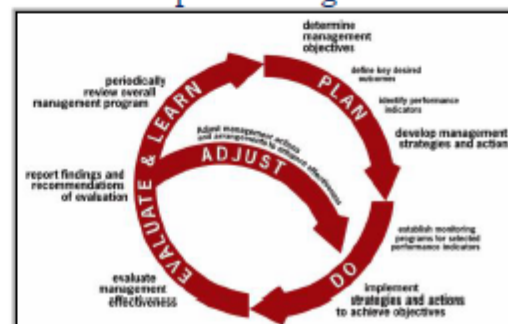
Adaptive management

- MPA resilience can be promoted through adaptive management within governance
- Adaptive management (AM) is a process of **systematically testing** management assumptions through time, **learning** from the **evaluation results** of such testing, and using this learning to **regularly revise** and improve upon **management practices**.

Adaptive management

- Using this test-learn-adapt, or 'learning by doing', approach of regular testing and learning allows managers and other decision makers (e.g. MPA board) to guide future management efforts and to adapt (if necessary) in a timely and informed manner...manage proactively
- Requires monitoring and evaluation to meet the needs of MPA decision-making

Adaptive Management



Recreated from CSIRO, Australia

NOT trial-and-error learning

- Deliberate and experimentally-designed 'learning by doing' adaptive management approach **is not** a random, opportunistic 'trial-and-error' approach to learning
- Adaptive management should:
 - (1) improve management effectiveness
 - (2) reduce uncertainty through feedback
 - (3) improve understanding of impacts of management and policy interventions

Practical Approach to Adaptive Management

There are four steps:

- Step 1: Develop a plan;
- Step 2: Take action;
- Step 3: Evaluate progress; and
- Step 4: Adjust future action.

Upon completion of these four steps, one cycle of the AM process has been achieved. From here, the process returns to step one and the cycle begins again.

Practical Approach to Adaptive Management

Step 1: Develop a plan

Task 1(a): Engage fishers and other stakeholders

Task 1(b): Describe current situation in the MPA

Task 1(c): Define MPA management goals and strategies to be used

Task 1(d): Outline the shared assumptions to be tested

Task 1(e): Define the MPA management objectives and strategic activities

Task 1(f): Define how the effectiveness of the plan will be measured

Diagnosis radar

An integrated framework for diagnosis of threats and opportunities similar to SWOT



Practical Approach to Adaptive Management

Step 2: Take Action

Task 2(a): Secure the resources and permissions necessary to implement the plan

Task 2(b): Designate and organize an implementation team

Task 2(c): Initiate safety protocols

Task 2(d): Implement monitoring workplan and collect baseline data

Task 2(e): Implement activity workplans across objectives

Task 2(f): Initiate communication plan

Practical Approach to Adaptive Management

Step 3: Evaluate Progress

Task 3(a): Regularly evaluate the plan's administrative progress

Task 3(b): Periodically evaluate the plan's management effectiveness

Task 3(c): Manage and analyze monitoring data collected

Task 3(d): Share evaluation results with target audiences

Task 3(e): Encourage peer review and independent validation of results

Practical Approach to Adaptive Management

Step 4: Adjust Future Action

Task 4(a): Systematically review and check shared assumptions against evaluation findings

Task 4(b): Identify and discuss potential implications of evaluation findings

Task 4(c): Capture learning from completed AM cycle

Task 4(d): Communicate adaptive response taken with target audiences

Strategic Planning

- A strategic plan documents an explicit set of goals and directions (management plan deals with objectives and activities) to be undertaken over a specified period
- It articulates a vision and strategies to address future threats and opportunities
- A strategic plan is a management tool for leading an organization from where it is now to where it wants to be in five or ten years based on projections of the future

MPA governance can be strategic

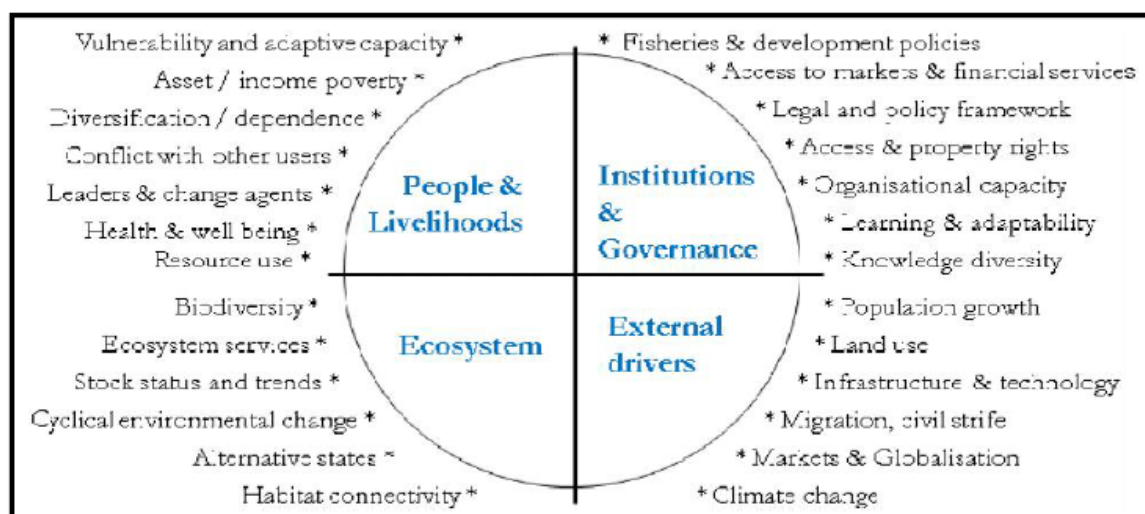
- MPA governance needs to include EBM, climate change, evaluating management effectiveness and adaptive management
- These features can be included in a plan that is both strategic and adaptive
- Good governance encourages planning to be participatory, transparent, equitable

Life after lunch

- Does this new perspective on MPA governance, based on resilience thinking, help you at all?
- What parts of it, if any, may be useful for you in governing an MPA such as the SMMA?
- Thinking of an adaptive strategic plan, what are the main features of your SWOT analysis or on your diagnosis radar that you need to address?
- How would the board go about institutionalizing design, testing, monitoring, evaluation, learning and revised action for adaptive management?

Appendix 4 – Output of diagnosis radar

DIAGNOSIS RADAR



PEOPLE AND LIVELIHOODS

Conflict among user groups (less than in 1992?)
 Economic factors - investment, income, poverty
 Illegal activities - visitor harassment, drugs, fishing
 Lack of training for boat boys etc.
 Equitable and sustainable use of resources, jobs
 Poor farming practices in watershed
 People are vulnerable to 'disasters'
 Public health and safety
 Water pollution including recreational water quality

INSTITUTIONS AND GOVERNANCE

Conflict among user groups, policies, organisations
 Breakdown of relationships with SMMA partners
 Organisational capacity human and financial
 Political interference
 Responsibilities for enforcement
 Lack of consensus on SMMA board on fundamentals
 SMMA is too rigid to adapt, or too fluid at times
 Relationship between general manager and board
 Lack of succession planning for management
 Board has not found its proper role in governance
 SMMA lacks its own by-laws; regulations under FA
 SMMA lacks board member orientation process

ECOSYSTEM

Status of fish stocks
 Habitat degradation e.g. sedimentation
 Poor water quality
 Impacts of natural and manmade disasters
 Invasive alien species
 Little spatial planning to enhance connectivity, EBM
 Pollution such as from plastics

EXTERNAL DRIVERS

Policies at national and higher levels
 Political influence
 The global imperative in its several forms
 Market pressures
 Climate change
 Maritime accidents and oil spills
 Technology transfer and adaptation
 Lack of land use planning or good land use practices
 Global economic crisis
 Disasters of all types
 Pollution from ships, dumping

Appendix 5 – Output of SWOT analysis

SMMA MPA governance strategic planning SWOT, 19 Jan 12

Strengths		Weaknesses	
Global/regional		Global/regional	
reputation of the SMMA as a flagship MPA role of the SMMA is accepted by external interests site of globally important biodiversity established network of partners exists		global funding priorities may not coincide with SMMA priorities, so financial constraint lack of coordination among Caribbean MPAs unable to benefit from larger scale marketing itself SMMA has 'graduated' in the eyes of some funders	
National /local		National /local	
local folk fairly well educated in marine matters established network of partners revenue does not go into Consolidated Fund level of financial and admin autonomy not a paper park!; governance is in place		SMMA learnt less from its experience than others other MPAs learn more from SMMA than the SMMA not effecting educational change to affect behaviour insufficient revenue generation from user fees	
Opportunities		Threats	
Global/regional		Global/regional	
funding for marine matters is available fair trade, green economy, sustainable livelihoods able to export expertise and best practices can serve as a partner in international research further diversification of tourism and other products		climate change and variability global financial and economic crisis marine pollution from ships and offshore sources benchmarks of quality of tourists inappropriate invasive species	
National /local		National /local	
can create more jobs can support spin off activities in related areas can improve environmental health of area can attract well-qualified staff due to its status act as a community focal body for Soufriere catalyst for community development enhanced revenue from tourism entrepreneurs reduced pressure due to new other MPAs in St Lucia SMMA has enhanced land values for taxation income more opportunities for staff capacity development diversification of livelihoods to include fishers		greater impacts from increased tourism etc. use marine pollution including from land-based sources cannot meet standards demanded by clients, users political interference and more conflicts predominance of need to meet current basic needs impacts from natural disasters poor land use planning and management	